

CLAIMS*add a 1*

~~1. Control system for remote manipulation~~  
equipment (41) fixed on carrying equipment (43)  
operating in a confinement containment (40) and  
subjected to radioactive radiation comprising:

- 5       - "onboard" control means located inside the  
          containment (40) designed to control movements  
          of the said manipulation and carrying equipment  
          (41, 43); and
- 10       - management equipment (42) located outside the  
          containment (40) providing the interface between  
          the operator and the control means,  
          characterized in that:
- 15       - the control means comprise firstly a control box  
          (20) impermeable to radiation and comprising  
          electronic circuit boards, and secondly a power  
          supply box (1) impermeable to radiation and  
          comprising at least one energy supply source,  
          and
- 20       - management means (42) comprising a communication  
          device to transmit orders to onboard control  
          means and to receive data about the state of the  
          said control means and the state of remote  
          manipulation and carrying equipment (41, 43).
- 25       2. Control system according to claim 1,  
          characterized in that the power supply box (1)  
          comprises two power supply sources operating  
          redundantly.
- 30       3. Control system according to claim 1 or 2,  
          characterized in that the electronic circuit boards  
          comprise several microprocessors operating alternately

~~and processing circuits providing functional control over this microprocessor.~~

4. Control system according to any one of claims 1 to 3, characterized in that it is self-configurable  
5 to match the manipulation equipment (41) and the carrying equipment (43).

5. System according to any one of claims 1 to 4, characterized in that the control means (42) comprise  
10 circuits for processing status data received from the control means to diagnose failures and operating errors of the equipment (41, 43) and the control means.

6. System according to any one of the previous claims, characterized in that the control means are each provided with a base (19, 30), larger than the  
15 power supply box (1) and the control box (20), fixed permanently on each equipment to be controlled and each being provided with:

- means of attachment to a control box (20) or a power supply box (1) onto the base;
- 20 - internal connection means to make electrical and/or electronic connections between the box and the base on which it is fixed; and
- external connection means for making external electrical and/or electronic connections between  
25 the equipment (41, 43) to be controlled and the base (30).

7. System according to claim 6, characterized in that the power supply boxes (1) and the control boxes (20) are provided with locking means (10, 12, 21, 23)  
30 on their corresponding bases (19, 30, 44), that can be manoeuvred from outside these power supply boxes (1) and control boxes (20).

~~8 System according to claim 6, characterized in  
that a lead base plate (31) is placed under the base  
(30) of each control box (20).~~

5 9. System according to claim 6, characterized in  
that the power supply boxes (1) and the control boxes  
(20) each comprise a stainless steel housing closed by  
a Plexiglas cover (6, 27).

10 10. System according to claim 9, characterized in  
that it comprises gaskets (8, 26) to be used for  
~~assembly of the Plexiglas covers (6, 27).~~